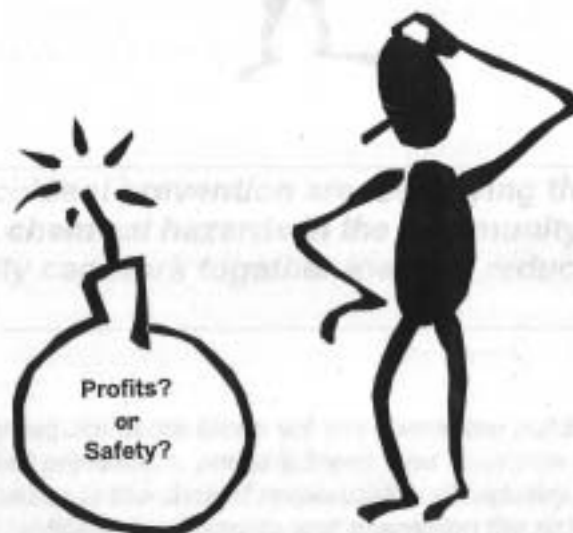


# No Accident!

How Industry and Government Agencies Are Failing to Prevent Chemical Spills



## Major Accidents and Serious Incidents: 1999-2000 Contra Costa County-California

Communities for a Better Environment-California and Contra Costa Building and Construction Trades Council

## EXECUTIVE SUMMARY

**No Accident!** presents the results of an analysis of County records of industrial hazardous materials incidents and accidents. In 1999 and 2000, fires, explosions and toxic releases continued to kill and injure workers and sicken hundreds of nearby residents. Major accidents continued at the rate of almost one per month despite various new agency efforts to prevent chemical spills.

Analysis of the most recent data on file reveals an alarming failure of industry and government to come to terms with the problems of industrial accidents. Data maintained by the Contra Costa County Hazardous Materials Division reveals that:

- The County experienced 13 major accidents<sup>2</sup> in 1999 and 12 major accidents in 2000. Four workers lost their lives during the period, making it the deadliest two-year period in County refinery history.
- Refineries are responsible for the vast majority of major accidents and serious incidents.
- A large percentage of accidents were actually worse than the facility first reported, which may have prevented appropriate response and investigation. Some facilities, especially Chevron's Richmond refinery, failed to notify the County of some accidents until confronted by offsite complaints.
- County staff failed to verify self-reported facility claims by conducting on-scene investigations 95% of the time in connection with serious incidents and 80% of the time in connection with major accidents.
- Many accidents recur at the same "repeat offender" processes that are never made fully reliable.

**No Accident!** concludes with a number of recommendations for action to address the need for industrial safety, including proposals designed to

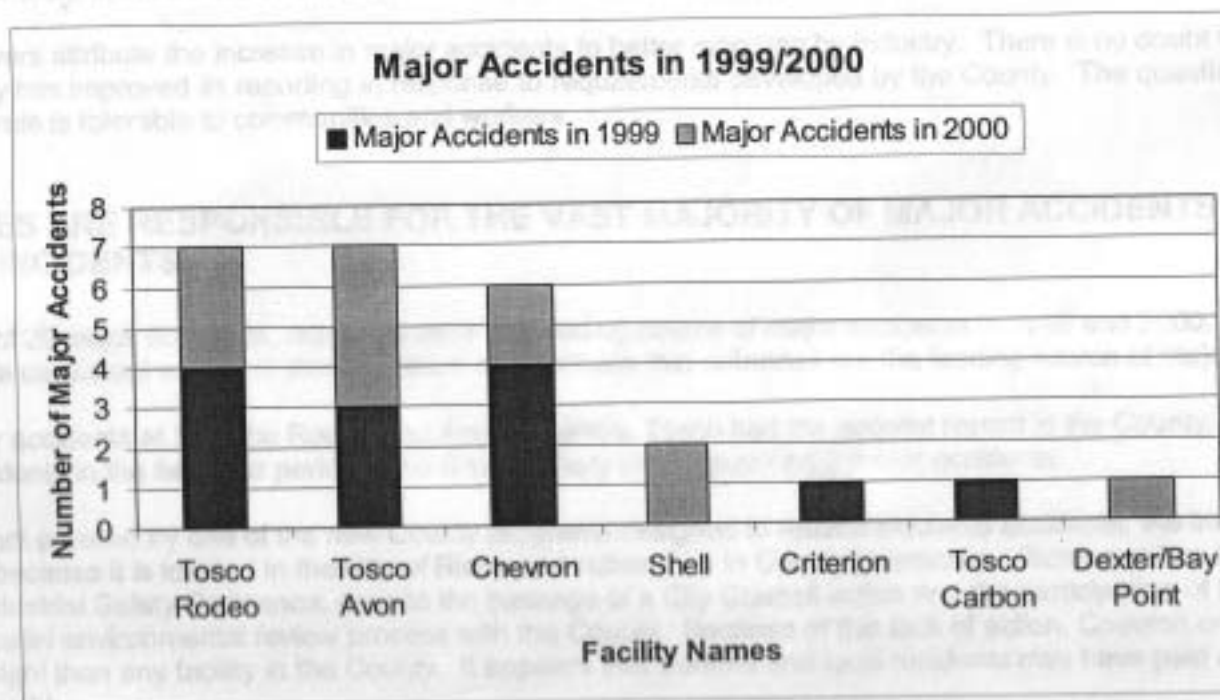
- Fulfill the promise of easy access to information regarding industrial hazards.
- Improve the accuracy of this information.
- Focus inquiry on industrial processes most likely to cause accidents.
- Ensure the effective participation in problem solving by the communities most at risk.

<sup>2</sup> This study reviewed official incident report records on file at the Contra Costa County Hazardous Materials Division. See the discussion of methodology below.

## CONCLUSIONS

### THE RATE OF MAJOR ACCIDENTS REMAINS UNACCEPTABLY HIGH

There were 25 major accidents in Contra Costa County industrial facilities in 1999 through 2000. This is more than one major accident every month. In comparison, the previous analysis reported one major accident every 5 weeks during the period January 1996 to June 1997.<sup>5</sup> Clearly, major accidents continue at the same unacceptably high rate.



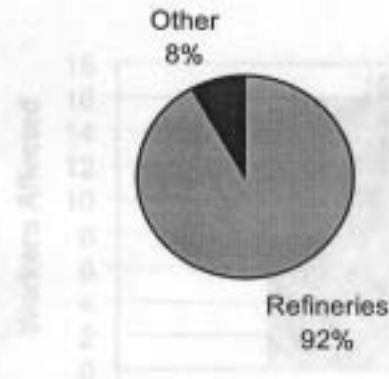
<sup>5</sup> See *Rising Risks to Refinery Communities, the Troubling Trend of Toxic Spills in Contra Costa County California 1989-1997* (July 8, 1997) p. 1.

Rodeo, the Avon refinery (Tosco/Ultramar), and Shell were responsible for 202 of the total 216 serious incidents in 1999 and 2000. The fact that refineries in the County are responsible for 94% of serious incidents is consistent with past analyses.

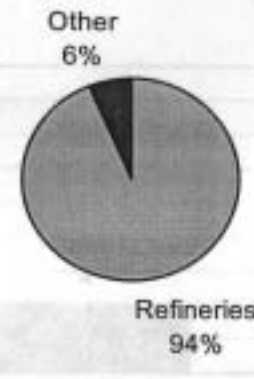
Worker deaths and injuries on the job continue to occur at alarming rates at Contra Costa County refineries. In 1999 and 2000, at least 15 injuries and 4 deaths were reported to the Contra Costa County Hazardous Materials Division. In fact, more deaths may have occurred because workplace injuries are not always reported to the County. Worker injuries are usually reported to CAL OSHA.

### Refinery Share of Major Accidents and Serious Incidents

Major Accidents



Serious Incidents



Worker Injuries

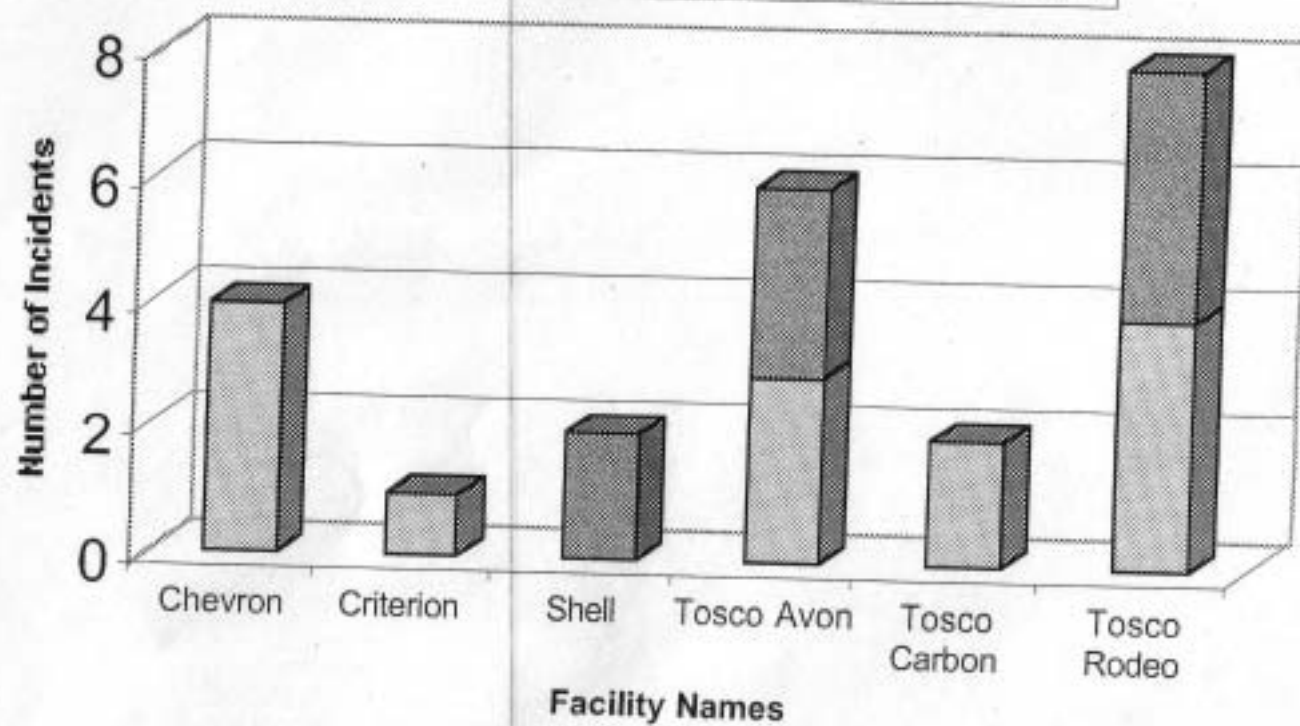
Worker Deaths

It may well be that refining industry pressures to exceed past performance and to increase competitive advantages have overwhelmed remedial efforts. Many facilities may have engaged in cost cutting measures, increased production and delayed maintenance, which in turn may have out-paced any new safety improvements. During this period, refineries have been bought, sold, and affected by mergers. These industry efforts together with other market forces have led most oil companies to post extremely high profits in 1999 and 2000.

Title

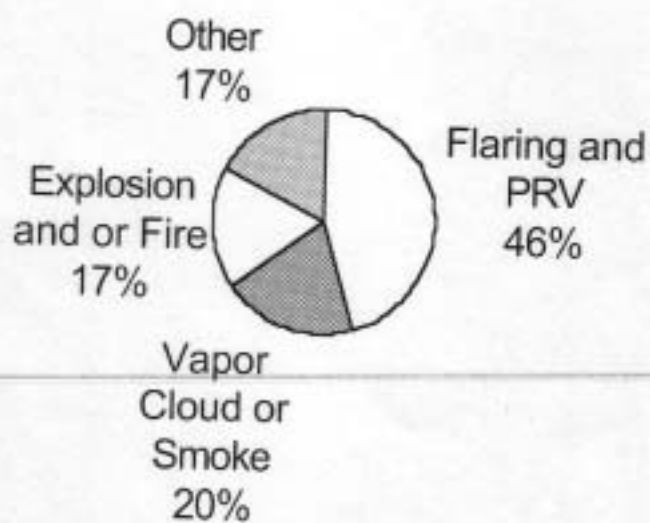
### Major Industrial Incidents in 1999 and 2000

□ Number of Incidents in 1999 ■ Number of Incidents in 2000



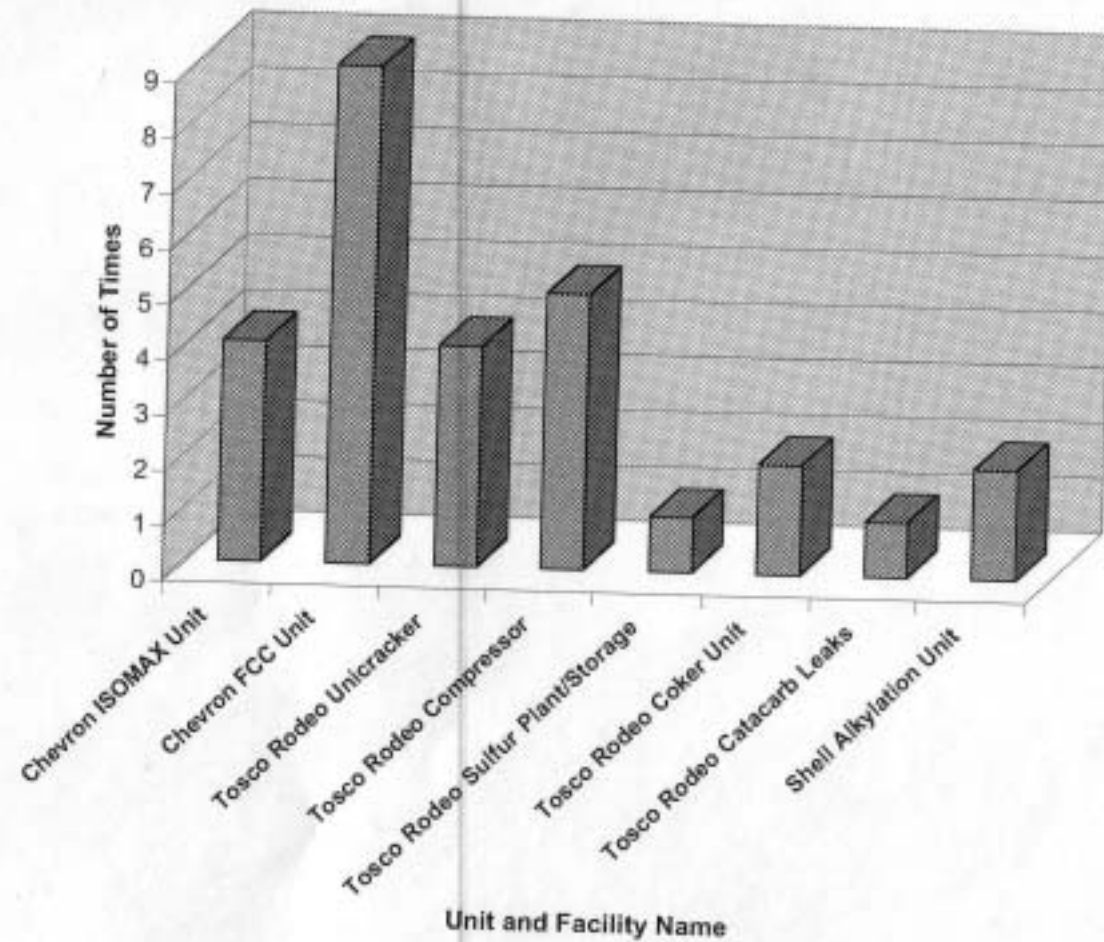
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**Types of Re-Occuring Incidents and their  
Frequency in 1999 and 2000**

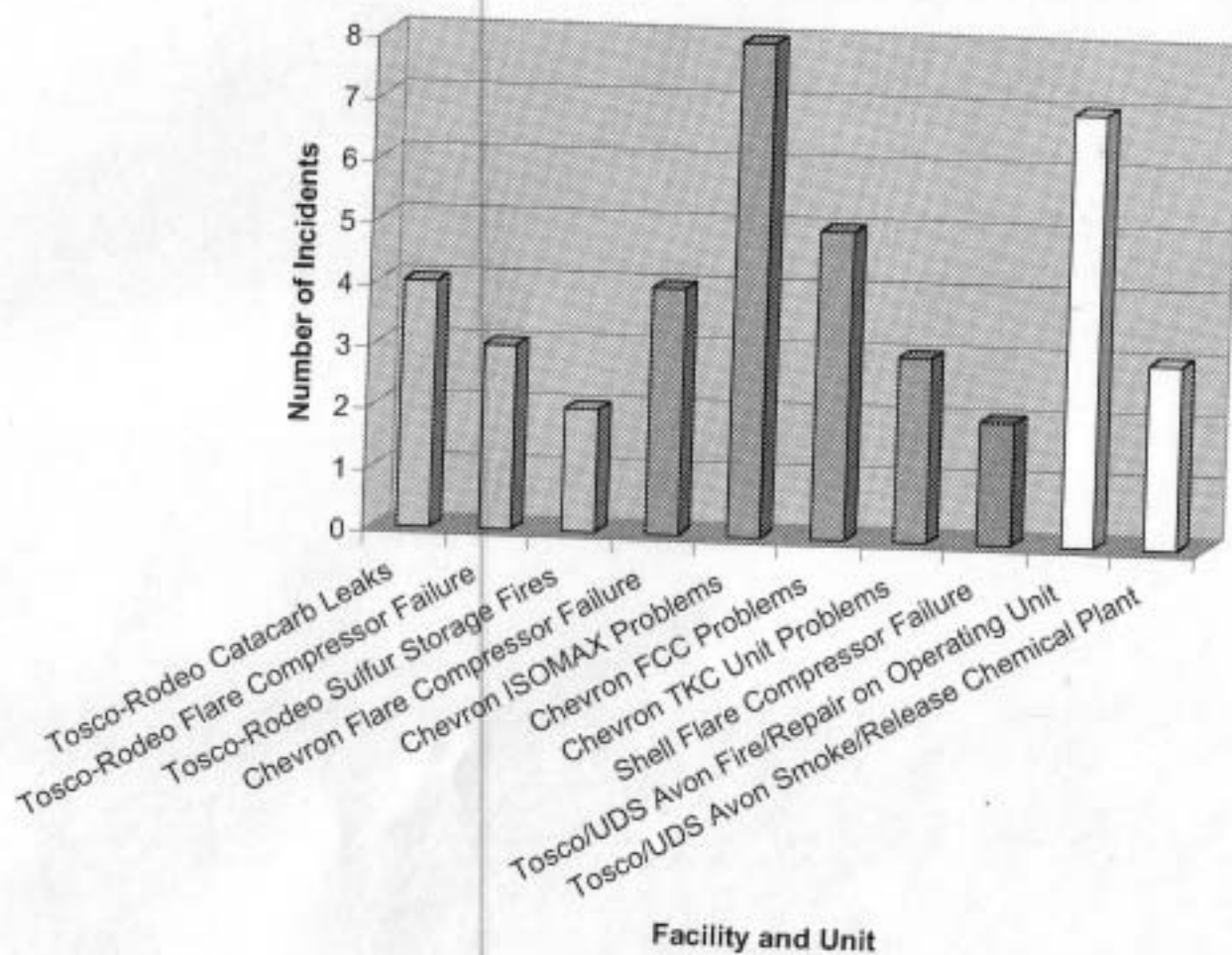


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Chart of Re-Occuring Problems by Unit and Facility in 1999

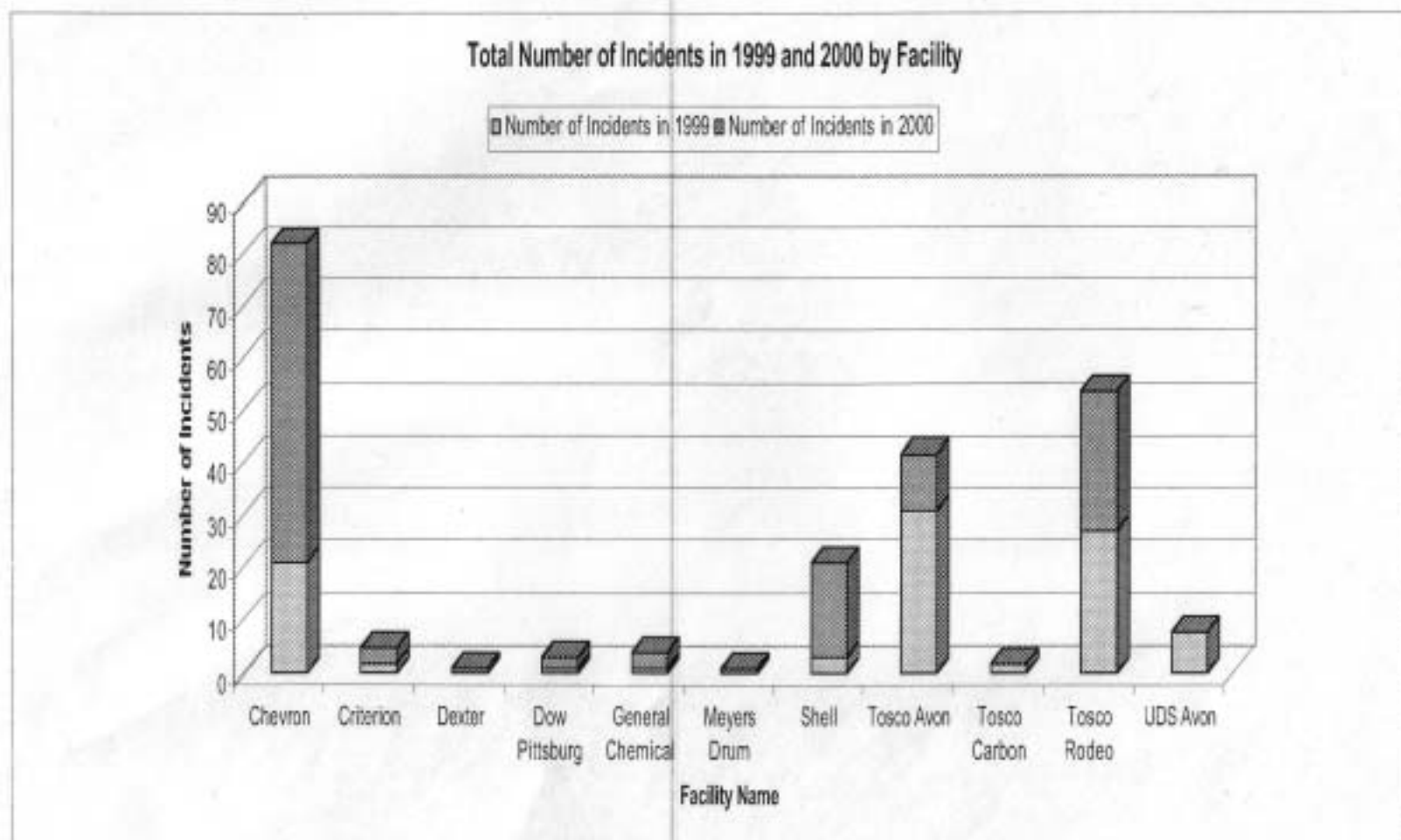


## Re-Occuring Problems by Facility and Unit in 2000

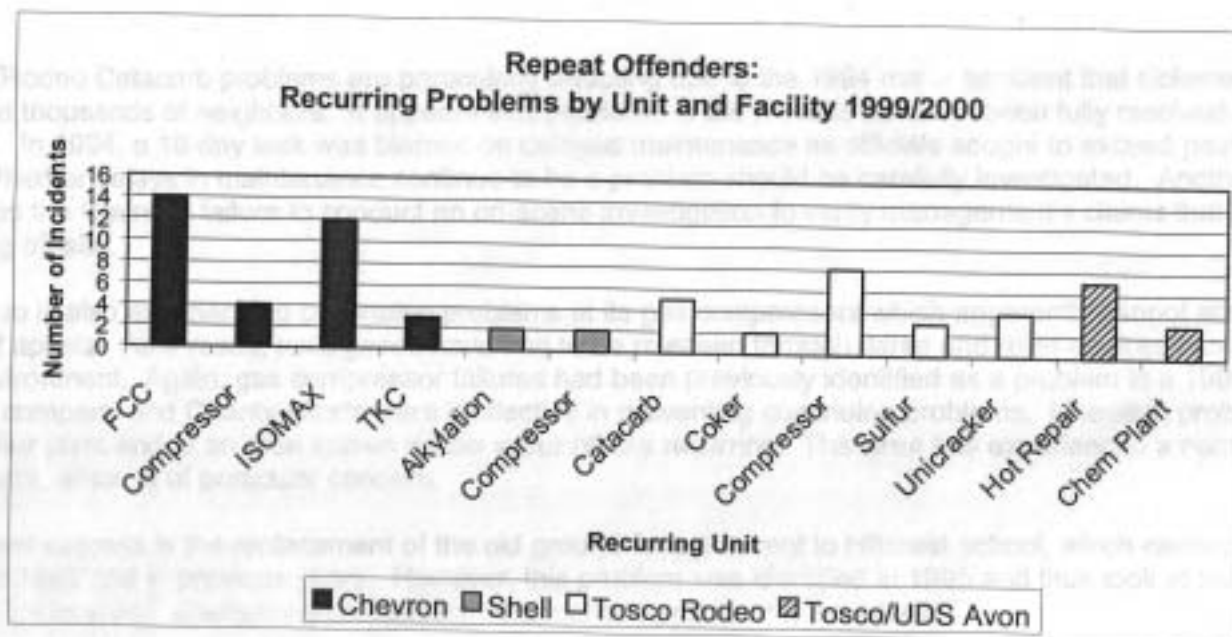




## Oil Refineries: Serious Incidents & Major Accidents in Contra Costa Exceed Other Facilities



For example: a "serious incident" is an upset where toxic gases **COULD** cause an explosion or fire, worker or community injury, and in some cases does. If it causes a serious impact it becomes a "major accident".



Chevron's refinery was the worst facility for recurring problems in the County with a total of 33 incidents involving the same 4 units. Fourteen serious incidents occurred at Chevron's FCC unit alone. Twelve serious incidents occurred at a related unit, the Isomax. Both the Isomax and the FCC units had experienced major accidents in past years. These units were involved in Chevron's controversial reformulated fuels project, which was challenged by community and environmental groups as increasing pollution and accident risks from increased intensive refining methods. Since Richmond has failed to adopt the County's Industrial Safety Ordinance approach, there is no adequate County oversight or public opportunity to examine and find root cause solutions. Instead Chevron controls self-investigations and solutions, which are apparently ineffective.

Tosco's Rodeo refinery closely followed as the County's second worst facility for recurring problem units with a total of 22 incidents involving five units. Recurring problems caused serious incidents in the refinery's Unicracker unit, gas compressors, Catacarb, sulfur plant, and Coker unit, again and again. Several of these units have had major accidents in past years.

## Appendix

### Major Accidents in Contra Costa County in 1999

Facility	Date	Summary of Accident	Action Taken	On-scene Investigation	Worse than originally reported	Worker Injury	Fire/Explosion	Flaring/PRV Accident	Vapor Cloud/Smoke	Written Report	Root Cause Investigation
Tosco Avon	2/23/99	Major Accident: Fireball at Unit 50 during maintenance on operating unit burns 5, kills 4.	Yes-Refinery asked to close for safety review	YES	YES	5 injured - 4 dead	YES	NO	NO	YES	YES
Tosco Rodeo	3/9/99	Major Accident: Leak at Unicracker-called level 2 alert. Downgraded to level 0. Flaring from plant upset.	NO	NO	YES		YES	YES	YES	NO	NO
Tosco Avon	3/10/99	Major Accident: Gas Plant #5 loses power, 1000 cubic feet of gas flared, wet gas compressor fails, causing release through relief valves, further heavy flaring causes burning material to fall to the ground and ignite grass fire; further toxic release from foul water tanks relief valves.	NO	NO	YES		YES	YES	NO	NO	NO

### Major Accidents in Contra Costa County in 2000

Facility	Date	Summary of Accident	Action Taken	On-scene Investigation	Worse than reported originally	Worker Injury	Fire/ Explosion	Flaring/PRV Accident	Vapor Cloud/ Smoke	Written Report	Root Cause Investigation
Tosco Rodeo	3/17/00	<b>Major Accident:</b> Tank 271 overpressures and releases sour naptha vapors. Hillcrest Elementary shelters in place. Odors linger in community for hours.	72hr & 30 D reports req.	NO	YES		NO	YES	YES	YES	YES
Tosco Avon	3/22/00	<b>Major Accident:</b> Fire in Alky unit as repairs on operating are attempted. Flammables in the firewater burn two workers.	72hr & 30 D reports req.	NO	YES	2 injured	YES	NO	NO	YES	Requested - Tosco refuses
Chevron	5/21/00	<b>Major Accident:</b> High pressure and vibration alarms shutdown a compressor at the Isomax; flaring of gases with hydrogen sulfide gas releases 6009 lbs. of SO <sub>2</sub> .	72 hr. report requested	NO	YES		NO	YES	NO	NO	NO
Tosco Avon	5/23/00	<b>Major Accident:</b> Large vapor cloud of diesel released from HDS Unit #2-greater than 5,000 lbs.	Root Cause Analysis Requested	NO	YES		NO	NO	YES	YES	NO
Tosco Avon	6/6/00	<b>Major Accident:</b> Fire at Coker unit when naptha leaks and catches fire. Two workers are injured	72hr & 30 D reports req.	NO	YES	2	YES	NO	NO	YES	YES

**CARB PHASE 2 REFORMULATED FUEL PROJECTS**

**+**

**REFINERY PROFITABILITY PROJECTS**

**(INTENSIVE REFINING+DIRTY CRUDE)**

**+**

**INDUSTRY SELF REPORTING**

**+**

**LACK OF FULL AIR MONITORING IN FENCELINE AREAS**

**=**

**MORE POLLUTION**

**MORE CHEMICAL SPILLS**

**FOR REFINERY NEIGHBORS**

**=**

**MORE ENVIRONMENTAL INJUSTICE**

**REFORM 3 PROJECTS MUST NOT:**

**CREATE ADDITIONAL POLLUTION FOR FENCELINE COMMUNITIES  
ALLOW POLLUTION TRADING SCHEMES**

**CARB MUST:**

**FIX REFORM 2 REFINERY PROJECTS FIRST!**

**INCREASE ENFORCEMENT**

**INCREASE REAL TIME FENCELINE MONITORS**

**MAKE DATA ACCESSIBLE TO IMPACTED COMMUNITIES**